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FISHING PRESSURE AND CATCH IN THE BEAR RIVER
IN FRANKLIN COUNTY AND ITS MAINSTREAM FISH
POPULATIONS IN SOUTHEASTERN IDAHO

by

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FISHING PRESSURE AND CATCH IN THE BEAR RIVER
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ABSTRACT:

We conducted an angler-count-interview type creel census in 1974 along the Bear River from the Cleveland Bridge to the Utah state line.

The greatest fishing pressure occurred in Oneida Narrows when water flows were low. Virtually no pressure occurred from the Highway 91 bridge northwest of Preston to the Utah state line.

Yellow perch dominated the catch from Oneida Reservoir while hatchery rainbow and mountain whitefish were caught in the greatest numbers from the river downstream from Oneida Dam.

Mountain whitefish and Utah suckers were the dominate fish found in the river while electrofishing,

OBJECTIVES

In 1972 and 1973, we conducted a fisheries project in the Bear River drainage, Heimer, 1974. We continued this project **in** 1974 to assess fishing pressure in the river from the Cleveland Bridge downstream to the Utah state line and fish populations in selected areas.

TECHNIQUES USED

We conducted an angler count-interview type creel census along the Bear River during the summer of 1974 using techniques as described by Heimer (op. cit.) for other areas of the Bear River.

The 1974 census encompassed the period from May 25 through August 30 and covered the area from Oneida Reservoir to the Utah state line. This was further divided into four areas as follows:

Oneida Reservoir - that area from the Cleveland Bridge (Highway 34 crossing) to Oneida Dam.

Oneida Narrows - that area from Oneida Dam downstream to the irrigation pipe which crosses the river approximately 1/5 mile upstream from the mouth of Mink Creek.

From the irrigation pipe which crosses the river approximately 1/5 mile upstream from the mouth of Mink Creek to the Highway 91 bridge approximately 4 miles northwest of Preston.

From the Highway 91 bridge crossing approximately 4 miles northwest of Preston to the Utah state line.

We used a generator with an output of approximately 4 amps and 150 watts to assess fish populations in the river. The electrofishing equipment was constructed so that when in operation an aluminum canoe served as the negative electrode and a dip net was attached to the positive.

RESULTS

Angler Counts

We counted 429 anglers fishing the Bear River from the Cleveland Bridge to the Utah state line during the 1974 census; of these, 12.1 percent were fishing Oneida Reservoir, 73.9 percent Oneida Narrows, 14.0 percent from the irrigation pipe which crosses the river 1/5 mile upstream from the mouth of Mink Creek to the Highway 91 bridge (Table 1). We did not observe any anglers fishing the river between the Highway 91 bridge crossing and the Utah state line. High water flows during the mid-day eliminated much of the fishing below Oneida Dam. In this area most of the fishing pressure occurred during count one when water flows were low.

Angler Interviews

We found yellow perch to be the dominant fish species caught at Oneida Reservoir

Table 1. Numbers of anglers fishing the Bear River in four counting periods during the 1974 census.

Area	Number of anglers counted				Total	Percent by area
	Count 1	Count 2	Count 3	Count 4		
Oneida Reservoir	12	19	16	5	52	12.1
Oneida Narrows	165	24	54	74	317	73.9
Irrigation pipe crossing 1/5 mile upstream from mouth of Mink Creek to Highway 91 bridge crossing	30	11	13	6	60	14.0
From the Highway 91 bridge crossing to the Utah state line	0	0	0	0	0	0
Totals	207	54	83	85	429	
Percent by count	48.2	12.6	19.4	19.8		100.0

where anglers averaged 1.2 per hour (Table 2). Rainbow trout and mountain whitefish were the dominant fish species caught in Oneida Narrows where anglers averaged .5 and .3 fish per hour, respectively (Table 3). Anglers averaged 1.1 mountain whitefish per hour and .2 rainbow trout in the section from the irrigation pipe to the Highway 91 bridge crossings (Table 4).

Estimated Angling Pressure and Catch

We estimated 518 hours fished, 2,406 yellow perch and 9 bluegill caught from Oneida Reservoir during the 1974 census (Table 5). We estimated 2,981 hours fished, 1,606 rainbow trout, 23 cutthroat, and 746 mountain whitefish caught from the Bear River between Oneida Dam and the irrigation pipe 1/5 mile upstream from the mouth of Mink Creek during the 1974 census (Table 6). We estimated 658 hours fished, 90 cutthroat, and 658 whitefish caught from the irrigation pipe near Mink Creek downstream to the Highway 91 bridge during the census (Table 7). We did not see or interview anyone fishing the Bear River from the Highway 91 bridge to the Utah state line during the 1974 census; therefore, we estimated that both pressure and catch in this area during the census was zero.

Pressure and Catch Other than Census Period

Oneida Reservoir and the Bear River from the State Highway 36 bridge (mouth of Mink Creek) downstream to the Utah state line are open to year-round fishing.

Oneida Reservoir receives a considerable amount of fishing pressure in the spring. In addition to the fishing pressure and catch during the census period, we estimated anglers fished an additional 400 hours and caught 1,500 yellow perch, with most being taken in May.

As the fishing season in Oneida Narrows opens with the general season (the same date as the census was started) we did not miss any early fishing. We estimated an additional 500 hours fished, 260 rainbow and 200 whitefish caught from this area during the fall months.

We estimated an additional 600 hours fished, 50 cutthroat and 700 mountain whitefish caught from the irrigation pipe downstream to the Highway 91 bridge with the catch equally divided between February, March, and May.

The area from the Highway 91 bridge to the Utah state line receives virtually no fishing pressure at any time of the year.

Origin of Fish Taken by Anglers

With the exception of the rainbow trout caught in Oneida Narrows, all fish taken from the river originated in the wild. In Oneida Narrows, 97 percent of the rainbow trout taken were of definite hatchery origin.

Origin of Anglers

Of 251 anglers we checked fishing the Bear River during the 1974 census, 154 (61.3 percent) were from Utah and 61 (24.3 percent) were from Franklin County (Table 8).

Table 2. Number of anglers interviewed, hours fished, and catch from Oneida Reservoir during the 1974 census.

Dates inclusive	Number of anglers interviewed	Number of hours fished	Number of fish captured	
			Yellow perch	Bluegill
May 25-June 7	18	32	33	2
June 8-June 21	9	12	17	0
June 22-July 5	4	8	0	0
July 6-July 19	0	0	0	0
July 20-Aug. 2	0	0	0	0
Aug. 3-Aug. 16	4	6	22	0
Aug. 17-Aug. 30	3	9	7	0
Totals	38	67	79	2
		Fish per angler	2.1	.0
		Fish per hour	1.2	.0

Table 3. Number of anglers interviewed, hours fished, and catch from the Bear River from Oneida Dam downstream to the irrigation pipe which crosses the river 1/5 mile upstream from the mouth of Mink Creek during the 1974 census.

Dates inclusive	Number of anglers interviewed	Number of hours fished	Number of fish captured		
			Rainbo	Cutthroat	Mountain whitefis
May 25-June 7	80	101	34	3	50
June 8-June 21	62	80	24	2	25
June 22-July 5	16	18	14	0	5
July 6-July 19	8	6	0	0	0
July 20-Aug. 2	12	8	3	0	0
Aug. 3-Aug. 16	18	25	32	0	0
Aug. 17-Aug. 30	12	10	9	0	0
Totals	208	248	116	5	80
		Fish per angler	.6	.0	.4
		Fish per hour	.5	.0	.3

Table 4. Number of anglers interviewed, hours fished, and catch from the Bear River from the irrigation pipe which crosses the river 1/5 mile upstream from the mouth of Mink Creek downstream to the Highway 91 bridge during the 1974 census.

Dates inclusive	Number of anglers interviewed	Number of hours fished	Number of fish captured	
			Rainbow	Mountain whitefish
May 25-June 7	6	2	0	0
June 8-June 21	18	10	0	3
June 22-July 5	2	2	0	8
July 6-July 19	2	4	0	4
July 20-Aug. 2	4	6	0	13
Aug. 3-Aug. 16	6	7	7	0
Aug. 17-Aug. 30	3	8	0	15
Totals	41	39	7	43
		Fish per angler	.2	1.0
		Fish per hour	.2	1.1

Table 5. Estimated hours fished and catch from Oneida Reservoir during the 1974 census.

Dates inclusive	Estimated hours fished	Estimated catch	
		Yellow perch	Bluegill
May 25-June 7	183	1,875	9
June 8-June 22	98	68	0
June 22-July 5	66	0	0
July 6-July 19	0	0	0
July 20-Aug. 2	0	0	0
Aug. 3-Aug. 16	127	429	0
Aug. 17-Aug. 30	44	34	0
Totals	518	2,406	9

Table 6. Estimated hours fished and catch from the Bear River during the 1974 census from Oneida Dam downstream to the irrigation pipe which crosses the river 1/5 mile upstream from the mouth of Mink Creek,

Dates inclusive	Estimated hours fished	Estimated catch		
		Rainbow	Cutthroat	Mountain whitefish
May 25-June 7	778	265	23	389
June 8-June 21	823	247	0	254
June 22-July 5	3 28	288	0	103
July 6-July 19	128	0	0	0
July 20-Aug. 2	231	87	0	0
Aug. 3-Aug. 16	396	451	0	0
Aug. 17-Aug. 30	297	268	0	0
Totals	2,981	1,606	23	746

Table 7. Estimated hours fished and catch from the Bear River during the 1974 census from the irrigation pipe which crosses the river 1/5 mile upstream from the mouth of Mink Creek downstream to the Highway 91 bridge.

Dates inclusive	Estimated hours fished	Estimated catch	
		Cutthroat	Mountain whitefish
May 25-June 7	193	0	58
June 8-June 21	114	0	0
June 22-July 5	33	0	171
July 6-July 19	32	0	32
July 20-Aug. 2	108	0	232
Aug. 3-Aug. 16	90	90	0
Aug. 17-Aug. 30	88	0	165
Totals	658	90	658

Table 8. Origin of 251 anglers fishing the Bear River from the Cleveland Bridge (Highway 34) to the Utah state line during the 1974 census.

County or state of origin	Number of anglers	Percent of anglers
Franklin	61	24.3
Bannock	11	4.4
Bonneville	6	2.4
Bingham	5	2.0
Other Idaho counties	6	2.4
Utah	154	61.3
Other states	8	3.2
Totals	251	100.0

Type of License

Approximately 41 percent of the anglers checked between the Cleveland Bridge and the Utah state line were fishing with a nonresident season fish or class 12 license. The second most common was the resident fish and game or class 01 license (22.5 percent), (Table 9).

Table 9. Type of license used by 245 anglers fishing from the Cleveland Bridge (Highway 34) to the Utah state line during the 1974 census.

License type and prefix	Number anglers	Percent of total
Resident Fish and Game - 01	55	22.5
Resident Fish - 03	12	4.9
Nonresident Season Fish - 12	101	41.2
Nonresident Seven Day Fish - 13	17	6.9
Nonresident One Day Fish - 14	12	4.9
Juvenile	39	15.9
Other License Types	9	3.7
Totals	245	100.0

Location of Angling Pressure

Of 270 anglers we checked fishing the river between the Cleveland Bridge and the Utah state line, 80 or 29.6 percent were at the Red Rock Campground, 50 or 18.5 percent midway between the Red Rock Bridge and the irrigation pipe, and 40 or 14.8 percent at the upper vehicle bridge near the Oneida Plant (Table 10).

Species Composition and Length of Fish in the Bear River

The Bear River downstream from the cheese plant contains a high population of mountain whitefish (Table 11). It also contains a high population of Utah suckers from Georgetown Creek to Alexander Reservoir, and approximately equal

Table 10. Number of anglers at various locations along the Bear River between the Cleveland Bridge and the Utah state line during the 1974 census.

Location	Start of each two week period, month and day and number anglers							Total	Percent
	5/25	6/8	6/22	7/6	7/20	7/3	7/17		
Cleveland Bridge	2	0	0	0	0	0	0	2	.7
Maple Grove Hot Springs	0	3	0	0	0	3	0	6	2.2
Oneida Reservoir Campground	12	5	4	0	0	1	3	25	9.3
Oneida Dam	11	0	0	0	0	3	0	14	5.2
Upper Vehicle Bridge	16	10	7	0	3	4	0	40	14.8
Red Rock Campground	33	21	7	5	1	9	4	80	29.6
Red Rock Bridge	4	11	1	1	0	0	4	21	7.8
Midway Lower Oneida Narrows	21	15	2	2	6	0	4	50	18.5
Irrigation Pipe	1	2	0	0	0	0	0	3	1.1
Highway 36 Bridge	11	1	0	2	0	0	1	15	5.6
County Bridge	3	4	0	0	0	0	0	7	2.6
Highway 34 Bridge	4	0	1	0	2	0	0	7	2.6
Totals	118	72	22	10	12	20	16	270	100.0

Table 11. Species and approximate composition by electrofishing various sections of the Bear River. Other fish species were undoubtedly present in the areas, but not seen.

Area and date electrofished	Fish species present and approximate percent					
	Cutthroat	Mountain whitefish	Carp	Utah sucker	Mountain sucker	Green sucker
Thomas Fork Creek to Pegram - 8/15/74	1	35	0	32	0	32
Georgetown Bridge to Eight Mile Bridge - 8/8/74	1	14	0	85	0	0
Bailey Creek Bridge to Alexander Reser- voir - 8/7/74	0	13	1	85	1	0
Cheese Plant Bridge to Thatcher Bridge 8/13/74	0	50	20	30	0	0
Highway 36 Bridge to Highway 34 Bridge 6/15/74	0	97	0	3	0	0

numbers of mountain whitefish, Utah suckers, and green suckers in the area from Thomas Fork Creek to Pegram.

The mean total length in inches of mountain whitefish taken by electro-fishing ranged from 8.8 to 12.7 and the mean total length of the Utah suckers ranged from 17.6 to 20.6 (Table 12).

LITERATURE CITED:

Heimer, John T., 1974. Returns of Planted Rainbow Trout, Fishing Pressure and Catch in the Bear River and Fish Populations in Mainstem Reservoirs and Tributary Streams, Idaho Fish and Game Department. 50 pp,

Table 12. Mean total length in inches and length range of fish captured while electrofishing areas of the Bear River. The number in parenthesis is the sample size.

Species	Location, date, mean total length and length range in inches				
	Thomas Fork Cr. to Pegram 8/15/74	Georgetown Br. to Eight Mile Bridge 8/8/74	Bailey Cr. Br. to Alexander Reservoir 8/7/74	Cheese Plant Br. to Thatcher Br. 8/13/74	Highway 36 Br. to Highway 34 6/15/74
Cutthroat					
mean length	12.8 (6)	15.7 (1)	-	-	-
length range	9.8-16.2				
Mountain whitefish					
mean length	8.8 (38)	11.2 (19)	11.9 (16)	10.7 (14)	12.7 (30)
length range	3.5-12.3	3.7-14.1	7.8-15.0	7.9-14.4	10.0-15.7
Utah sucker					
mean length	17.9 (18)	18.0 (23)	17.6 (30)	19.3 (5)	20.6 (17)
length range	16.2-20.6	16.0-21.1	16.0-19.9	18.3-20.0	17.2-24.6
Green sucker					
mean length	13.4 (22)	-	-	-	-
length range	8.5-15.6				